

Appl. No. 10/790,521
Amdt. Dated 07/24/2006
Reply to Office action of March 22, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) Air separator system for separating shredded trash into pieces of relatively light material and relatively heavy material, comprising:

a first conveyor system having a conveyor belt wrapping around a roller at an one end of the conveyor belt, the convcyor belt having a direction of travel to the roller at the one end, and conveying the pieces shredded trash, in a the direction of travel, to the end of the first conveyor system belt;

an air manifold positioned underneath and approximately approximately at the end of the conveyor belt for providing blowing the pieces of shredded trash exiting the conveyor belt with an air stream which is generally in the direction of travel of the conveyor belt to the roller at one end ; and

a splitter plate system disposed at a position forward of the end of the conveyor system comprising an elongate element a cylinder which is essentially parallel to the roller at the end of the conveyor belt; and

means for moving the splitter plate system towards and away from the first conveyor system.

2. (Cancel) Air separator system, according to claim 1, wherein:

the elongate element is a cylinder.

3. (Currently amended) Air separator system, according to claim 2, wherein:

the roller rotates in a counterclockwise direction; and

the cylinder rotates is rotated in the same direction.

4. (Currently amended) Air separator system, according to claim 1, further comprising:

a splitter sheet hanging below the cylinder, defining an a first accumulation area on one side of the splitter sheet which is proximal the first conveyor system; and

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an second accumulation area on another side of the splitter sheet which is distal the first conveyor system.

5. (Currently amended) Air separator system, according to claim 4, wherein:

the second accumulation area has a second conveyor system for removing the lighter materials that accumulate on the side of the splitter sheet which is distal the first conveyor system.

6. (Original) Air separator system, according to claim 1, wherein:

the conveyor belt is disposed at an angle "a" with respect to horizontal; and

the angle is approximately 30-60 degrees.

7. (Currently amended) A splitter plate system for use in conjunction with a conveyor system comprising:

a structural frame having opposite side elongate elements and a bottom elongate element cylinder extending between the side elongate elements;

means for adjusting the speed and direction of rotation of the cylinder; and

a splitter sheet hanging from the two side elongate elements; and

means for moving the structural frame towards and away from the conveyor system.

8. (Cancel) A splitter plate system, according to claim 7, wherein:

the bottom elongate element comprises a cylinder.

9. (Original) A splitter plate system, according to claim 7, including:

means for raising and lowering the structural frame.

10. (Cancel) A splitter plate system, according to claim 7, including:

means for moving the structural frame towards and away from a conveyor system.

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11. (Original) A splitter plate system, according to claim 7, wherein:

the structural frame is a generally rectangular structural frame having a top elongate element and two opposite side elongate elements extending downwards from opposite ends of the top elongate element, and a bottom elongate element extending between bottom portions of the side elongate elements, thereby forming a generally rectangular window; and
the splitter sheet hangs from bottom ends of the two side elongate elements.

12. (Currently amended) Method of separating pieces of shredded trash into relatively light material and relatively heavy material, comprising the steps of:

conveying the pieces of shredded trash, in a direction of travel, to an end of a conveyor having a roller at one end;

blowing the pieces of shredded trash exiting at the end of the conveyor, providing with an airstream which is generally in the direction of travel of the conveyor, and

disposing a bar a splitter plate system, including a cylinder which is essentially parallel to the roller at the end of the conveyor and a splitter sheet, forward of the end of the conveyor; and
moving the splitter plate system with respect to the first conveyor system so that the relatively lighter pieces of material will be projected over the cylinder for collecting heavier the relatively heavier pieces of material in a first accumulation area on one side of the splitter sheet which is proximal the end of the conveyor and collecting the relatively lighter pieces of material in a second accumulation area on an opposite side of the splitter sheet which is distal the end of the conveyor.

13. (Currently amended) Method, according to claim 12, wherein the bar is a cylinder, and further comprising the step of:

rotating the cylinder.

14. (Currently amended) Method, according to claim 12, further comprising the steps of:

controlling an amount of pieces which are collected in the second accumulation area by adjusting at least one of the following parameters:

a speed of the conveyor,

an angle of the conveyor with respect to horizontal,

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an angle of the airstream with respect to the angle of the conveyor,
a pressure of the airstream,
a position of the airstream relative to the end of the conveyor,
a distance between the ~~bar~~ cylinder and the conveyor, and
a height of the ~~bar~~ cylinder with respect to a height of the conveyor.